DOCUMENT RESUME

ED 097 740 CS 500 831

AUTHOR Brown, Darlene Novakovich; Brown, Dennis Earl
TITLE Sex Stereotyping of Occupational Roles as a Determinant of Source Credibility.
PUB DATE Apr 74
NOTE 17p.; Paper presented at the Annual Meeting of the International Communication Association (New Orleans, Louisiana, April 17-20, 1974)

EDRS PRICE MF-$0.75 HC-$1.50 PLUS POSTAGE
DESCRIPTORS Communication (Thought Transfer); *Credibility; *Information Sources; *Occupational Information; Sex Role; *Sex Stereotypes

ABSTRACT

This study tested sex stereotyping of occupational roles as a determinant of source credibility. The two main independent variables involved sex of communicator and occupation of communicator. Occupations, analyzed only in terms of whether or not the occupation could be considered typically a "man's" or a "woman's" field, were chosen on the basis of a pretest used to determine male or female dominance. The dependent variables were initial source credibility scores as measured by a semantic differential. Independent variables were manipulated through an introductory statement. For each occupation all information was held constant. Subjects were then asked to rate each proposed speaker on the basis of information given. The authors used a semantic differential consisting of 12 scales. Results from the study indicate that sex of the source alone (sex stereotypification) does not account for credibility ratings and that sex stereotyping of occupational roles cannot be considered a single determinant of source credibility. Tables of findings are included. (Author/JM)

ED 077040

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

BEST COPY AVAILABLE

SEX STEREOTYPING OF OCCUPATIONAL ROLES AS A DETERMINANT OF SOURCE CREDIBILITY

PERMISSION TO REPRODUCE THIS COPYRIGHTED MATERIAL HAS BEEN GRANTED BY
Darlene Novakovich Brown
TO ERIC AND ORGANIZATIONS OPERATING UNDER AGREEMENTS WITH THE NATIONAL INSTITUTE OF EDUCATION. FURTHER REPRODUCTION OUTSIDE THE ERIC SYSTEM REQUIRES PERMISSION OF THE COPYRIGHT OWNER

by

DARLENE NOVAKOVICH BROWN

and

DENNIS EARL BROWN

PERMISSION TO REPRODUCE THIS COPYRIGHTED MATERIAL HAS BEEN GRANTED BY
Dennis Earl Brown
TO ERIC AND ORGANIZATIONS OPERATING UNDER AGREEMENTS WITH THE NATIONAL INSTITUTE OF EDUCATION. FURTHER REPRODUCTION OUTSIDE THE ERIC SYSTEM REQUIRES PERMISSION OF THE COPYRIGHT OWNER

Submitted to the

Interpersonal Division

of

International Communication Association

April, 1974

ARIZONA STATE UNIVERSITY

Tempe, Arizona

US 500 831

ABSTRACT

This study sought to test sex stereotyping of occupational roles as a determinant of source credibility. To determine the effect of sex stereotyping on initial source credibility, message variables were not studied thus isolating the source variable. The researchers were concerned with two main independent variables: sex of communicator, and occupation of communicator. Occupations were not analyzed individually, but only in terms of whether or not the occupation could be considered typically a "man's" or "woman's" field. The occupations in this study were chosen on the basis of a pre-test used to determine male or female dominance. The dependent variables were initial source credibility scores as measured by a semantic differential.

The independent variables were manipulated through an introductory statement. For each occupation all information was held constant. Subjects were then asked to rate each proposed speaker on the basis of information given. The authors used a semantic differential consisting of twelve scales.

Statistical analysis yielded the following results:

1. In all ten occupations there did not exist a significant interaction effect between the sex of communicator and the sex of Ss.

2. Women did not rate male communicators significantly higher then they rated female communicators.

3. Men did not rate male communicators significantly higher then they rated female communicators.

4. Occupations existing in either male dominated fields, or female dominated fields, or non-dominant fields did not produce significant differences in the ratings of male or female communicators.

5. The group of subjects tested did not demonstrate a sex bias.

Results from the study indicate that sex of the source alone (sex stereotypification) does not account for credibility ratings. Results from previous studies which contain both source and message variables were derived from

either the message alone, or a combination of message and source. Our findings indicate that sex stereotyping of occupational roles can not be considered a single determinant of source credibility.

INTRODUCTION

Rhetorical theorists from the time of Corax to McCroskey have dealt with the communication construct of ethos. Only more recently has the computer enabled modern students of persuasion to examine more closely the multi-faceted dimension of the speaker. This particular study was concerned with sex stereotyping of occupational roles as a determinant of source credibility.

Research in the area of sex as a variable in communication has sought to establish evidence of male chauvinism in audience perception of a communicator. The theory is usually expressed under these conditions: when all other source qualifications and the message content are held constant, audiences will respond more favorably to messages attributed to male communicators. The most notable of these studies have been the Goldberg study (1968) and the Miller and McReynolds study (1973). While both studies sought to determine the perceived competence of the source, findings were contaminated by the message variable. Failure to isolate the source variable from the message variable was a major limitation in both instances. For this reason our study chose to isolate the source variable in a format that would test the initial credibility of the source.

The Miller and McReynolds (1973) study dealt specifically with our area of interest. The researchers concentrated their analysis on the competence rating of male and female communicators with source qualifications and message content held constant. The study suggested that the single occupation used, nuclear physicist, may have biased the results. The researchers attributed the alleged bias to the idea that we (chauvinistically) think of the nuclear physicist as a male or as a field dominated by men.

The problem posed by Miller and McReynolds (1973) was the basis for the uncertainty from which this study began. By changing the design of the study to incorporate more occupations, and by eliminating the contaminating message variables (example: Miller and McReynolds (1973) had employed arguments pro ABM system) we have begun to establish the relationship of sex stereotypification and occupation to initial source credibility. Elimination of the message variable and thereby the emotionality, as their study suggested might then produce persuasive differences

that could be attributed to the higher perceived competence of the male source. The occupations selected for our study seemed appropriate for testing the question posed by Miller and McReynolds (1973), since all sources in this study were perceived with higher than neutral credibility. Our task was to isolate and test the initial source variable to determine whether or not differences would emerge.

In light of the fact that the Goldberg study (1968) used six fields as the basis of his research, his findings and procedures were of value to this study. Goldberg (1968) reported a study in which females evaluated the same article half written by "John T. McKay," half by "Joan T. McKay." The study asked, "are women prejudice against women?" The results of the study were three fold: (1) it was found that there was a general bias by women against women, (2) the bias was strongest in the traditionally masculine fields, (3) that even in the traditionally feminine fields women consider themselves inferior to men. Since the Ss used were college girls the researcher concluded that "if this study is typical of the educated and presumably progressive segments of the population," then intellectual double standards are not dead.

Previous research in the area of sex as a variable in communication has centered on the male's or female's susceptibility to persuasion and should also be considered as a part of the basis for this study. The Whittaker and Meade study (1967) attempted to determine if sex in persuasibility reflected unique features of a specific culture, or if the difference could be considered universal in nature. The sex differences in persuasibility were attributed to socially determined roles dictating submissiveness in females and independence in males. The evidence obtained strongly indicated "there might be a sex-age interaction such that sex differences in persuasibility are significant at certain ages and not at others" (Whittaker, p. 50).

In another study by Whittaker (1965) females were found to be more persuasible than males in the mediums of interpersonal communication and mass communication. The study used the Gough scale to determine the relationship of male and female characteristics of persuasible individuals.

An earlier study by Payne (1965) resulted in data that showed females were not more persuadable than males. Results of the study did find that males had low affect scores and females high affect scores.

Knowledge obtained from studies mentioned and others led us to believe that isolating the initial source variable and eliminating the message variable would result in biased source credibility ratings based on the sex of the receiver.

RESEARCH QUESTIONS AND HYPOTHESES

The research questions were formulated with the idea in mind of answering two types of questions: (1) that which dealt with sex, occupation, and credibility of the communicator, and (2) that which dealt with the subjects' sex and school majors. The questions the researchers hoped to answer were:

1. Do male and female sources differ significantly in perceived initial credibility regardless of the occupation?

2. Does an interaction effect exist between the sex and occupation of the source?

3. Does the sex of a subject have any effect on his perceived credibility of a speaker?

4. Does the school major of a subject have any effect on his perceived credibility of a speaker?

Based upon the above research questions, five hypotheses were developed. Each hypothesis was structured with the intent of predicting certain results from the collected data. The obtained results would give us expanded knowledge in the area of occupationally derived sex roles and source credibility. The hypotheses to be investigated were:

1. Female Ss will rate male communicators as higher credible sources than female communicators in all ten occupations.

2. Male Ss will rate male communicators as higher credible sources than female communicators for male dominated occupations.

3. Male Ss will rate female communicators as higher credible sources than male communicators for female dominated occupations.

4. Male Ss will rate male communicators as higher credible sources than female communicators for the non-dominated occupations.

5. The subjects' school majors will have the effect of rating the occupation which is most closely associated to his area as a higher credible source than other occupations.

METHOD

Pre-test

Determination of which occupations would be tested was accomplished through a pre-test. The researchers selected eighteen occupations from which ten were eventually selected. Two sections of Elements of Speech Communication at Arizona State University were used for the pre-testing. The subjects were asked to mark each occupation according to their perception of it as either male dominated, female dominated, or non-dominated.

From the results of this preliminary survey the researchers selected the ten occupations. Male dominated occupations chosen were Dentist, Physician, Criminal Lawyer, and Nuclear Physicist. Female dominated occupations selected were Legal Secretary, Nurse, and Dietitian. Three occupations were used which signified neither male or female dominance, but did favor one sex or the other. The three were Elementary School Teacher (female tendency), College Professor (male tendency), and Interior Decorator (female tendency).

Introductory Statements

For each of the ten occupations we constructed brief introductions. Due to the nature of this study it was necessary to select material for a speaker's introduction that would meet three criteria. First, the speaker's credentials: degrees, school graduated from, experience, present position, and speaker's tour sponsor, had to be believable yet of "good" quality. Secondly, four names, two female and two male had to be chosen that would be equivalent in terms of length and origin. Four names were used in place of two, to insure that no subject would receive two occupations with the same designated surname. Thirdly, the individual introductions for each of the ten occupations were to be of equal length and equivalent in content.

Construction of introductions for the ten occupations insured making each approximately the same length. The researchers used the pronoun's he or she (the same

number of times for each occupation-sex combination) to re-emphasize the sex of the speaker.

Each of the ten occupations had a male and a female name attached to it. This provided us with twenty occupation-sex combinations. As previously noted, four names (two male and two female) were interchanged to insure that no one subject would receive two same names (each subject received four occupation-sex response combinations).

Statistical analysis provided mean scores which indicated that regardless of sex or occupation, all sources were perceived with higher than neutral credibility (theoretical neutral being higher than four on a seven point semantic differential scale). This suggests to the researchers that the names and credentials attributed to each occupation-sex combination were valid and credible.

Measurement

Measurement of initial source credibility of each potential campus speaker was accomplished through the use of twelve semantic differential scales ~~(see Appendix)~~. The particular scales we employed were adapted to our needs from those developed and tested by James C. McCroskey (1966, p. 65), plus those scales by David K. Berlo, James B. Lemert, and others. The twelve adjectives were selected for their appropriateness to our occupation-sex study. A time factor in terms of instructor permission, and subjects being requested to fill out four sets of introduction scales, limited us to just twelve of the available adjectives.

The semantic differential we employed had been tested to cover five dimensions: (1) competence, (2) character, (3) sociability, (4) composure, and (5) extroversion. Prior to conducting the study we felt that the first two dimensions would receive positive responses, while the last three would be mostly neutral. The competence (expertness) dimension was expected to provide the majority of the measurable results in terms of source credibility.

Initial attitude toward the speaker's introductory statement was measured by the S's responses to the twelve semantic differential scales (covering the above five dimensions).

PROCEDURES

Ten sections of OSC 100, Elements of Speech Communication, at Arizona State University, provided the 207 subjects for the study. The sections were mostly composed of freshmen students with a variety of majors. The two researchers (one male and one female) acted as administrators of the proposed Speakers' Bureau Survey. Each subject was given a direction sheet which explained the purpose of the fictitious survey. Next the subjects were provided with a packet which contained four individual speakers and respective occupations. The packets were randomly distributed to each section. Participants were asked to read each brief introduction of a possible campus speaker, and then rate that speaker using the semantic differential provided. Attached to each packet was a sheet asking for demographic information about the Ss. The administrator requested each subject to place a yes or no at the bottom of each sheet containing a potential speaker, in response to the question: would you come hear this speaker?

Each speaker completed four semantic differentials on four different occupation-sex combinations. Total number of individual source questionnaires came to 829 (207 subjects times 4 responses per subject equals 828; the extra response was due to one subject inadvertently filling out five separate occuaption-sex semantic differentials). Sex of the Ss classified (by responses) into 460 male responses, 341 female responses, and 27 responses which failed to indicate sex.

Statistical Analysis

Statistical analysis of the data included factor analysis with varimax rotation. The criterion for termination of factor extraction was an eigen value of 1.00. For a factor to be considered meaningful it was required that at least two items be loaded on that factor. In order for an item to load on any one factor that item had to have a loading of at least .60 with no secondary loading of greater than .40 on any other factor. Analysis of variance was also performed, with the alpha level set at .05.

RESULTS AND DISCUSSION OF THE STUDY

The first step in the statistical analysis of our data was to conduct a factor analysis to determine which of the twelve semantic differential scales clustered. The

analysis yielded results similar to those compiled by others who used the same adjectives for the competence dimension. Table 1 indicates the three adjective scales which clustered, and their respective loadings.

TABLE 1

Factor Analysis of Semantic Differential Scales

Scale Adjective	Loadings
1. Trained-Untrained	.68
2. Qualified-Unqualified	.70
3. Expert-Inexpert	.77

These three scales met the criteria for factor extraction, and can be considered to have a meaningful relationship to sex stereotyping of occupational roles as a determinant of source credibility. They were designated as the competence dimension, and analyzed apart from the total scale, which covered competence, character, sociability, composure, and extroversion dimensions. Analysis of the competence dimension will be used to determine the acceptance or rejection of the hypotheses. All other items clustered on the other factor but only three scored .60 or better.

For each of the tables in this section: A = sex of the communicator (male-1, female-2), B = occupation, and C = sex of the subject (male-1, female-2). Since three scales were combined, the lowest possible scoring is 3, while the highest is 21. In this study the lower the score, the higher the credibility. An analysis of variance was performed on all ten occupations combined, only the male dominated occupations, the female dominated occupations, and the non-dominated occupations, to determine statistical significance between occupation, communicator sex, and subject sex. From the original 207 subjects, 6 were dropped because of their failure to mark which sex they were. The remaining 201 subjects were designated as 116 male Ss, and 85 female Ss, which provided 463 male responses and 341 female responses.

Hypothesis #1

The first hypothesis stated that female subjects will rate male communicators as higher credible sources than female communicators in all ten occupations. As

Table 2 below indicates, the amount of interaction between A (sex of communicator), and C (sex of subject) for all ten occupations did not reach the level of significance, therefore the null hypothesis could not be rejected.

TABLE 2

Analysis of Expertness Dimension (10 occupations)

SOURCE	M.S.	D.F.	F-RATIO	P
TOTAL	7.942	803.		
BETWEEN	22.802	39.		
A (Sex of Communicator)	.056	1.	.0078	.9271
B (Occupation)	68.618	9.	9.5519	.0000
C (Sex of Subject)	128.707	1.	17.9166	.0001
AB	2.924	9.	.4071	.9315
AC	10.924	1.	1.5207	.2154
BC	6.560	9.	.9132	.5135
ABC	5.186	9.	.7219	.6907
WITHIN	7.184	764.		

The interaction between communicator and subject is shown in Table 3.

TABLE 3

Comparison of Communicator Sex-Subject Sex Means*
(10 occupations)

		(C) Subject Sex	
		1	2
(A) Communicator Sex	1	5.7930	5.2099
	2	6.0155	4.9531

*Higher the score, the lower the credibility
**1 - male, 2 - female

The data shows that female subjects did not rate male communicators higher, but to the contrary, they rated female communicators as higher credible sources. However, the amount of difference was not statistically significant in order to accept the first hypothesis. It does illustrate a positive shift in attitude by women towards women, in opposition to Goldberg's (1968) study which exposed females as being prejudice against females. What Miller and McReynolds (1973) said about one occupation does not hold true for the ten occupations we tested. Further analysis will be conducted at a later date to determine the mean scores for each individual occupation. This would help determine whether or not the individual occupation itself was a factor in credibility ratings.

Hypothesis #2

The second hypothesis stated that male subjects will rate male communicators as higher credible sources than female communicators for male dominant occupations. Using the competence dimensions scores we see from Table 4 that male Ss did rate male communicators as higher credible sources (4.8 male mean versus 5.1 female mean-lower score higher credibility). However, the amount of difference was not statistically significant, and the null hypothesis could not be rejected.

TABLE 4

Comparison of Communicator Sex-Subject Sex Means*
(male dominated occupations)

		Subject Sex	
		1	2
Communicator Sex	1	4.8061	4.4221
	2	5.0989	4.2292

*Higher the score, the lower the credibility
**1 - male, 2 - female

Although there was no significant interaction between communicator sex-subject sex, the results do suggest a closing of the credibility gap for females in male dominated occupations.

Hypothesis #3

Hypothesis #3 predicted that male subjects will rate female communicators higher credible sources than male communicators for female dominated occupations. The means from Table 5 show that male subjects did rate female communicators higher credible sources; however, the results did not reach the level of significance. The third hypothesis was also rejected. The results would indicate that males are still hesitant about placing females on a higher level than themselves. Another possible explanation could be the male subjects' interpretation of a male who has "made it" in a female dominated occupation.

TABLE 5

Comparison of Communicator Sex-Subject Sex Means*
(female dominated occupations)

		Subject Sex	
		1	2
Communicator Sex	1	6.5886	5.5381
	2	6.4980	5.6414

*Higher the score, the lower the credibility
**1 - male, 2 - female

Hypothesis #4

The fourth hypothesis stated that male subjects will rate male communicators as higher credible sources than female communicators for non-dominated occupations. Interaction between communicator sex and subject sex resulted in no significant difference. Since the level of significance was not reached, the null hypothesis could not be rejected. It should be noted that results from the pre-test indicated two of the three non-dominated occupations tabulated closer to the female population, while the third occupation pointed closer to the male population.

TABLE 6

Comparison of Communicator Sex-Subject Sex Means*
(non-dominated occupations)

		Subject Sex	
		1	2
Communicator Sex	1	6.3131	5.9321
	2	6.7551	5.2299

*Higher the score, the lower the credibility
**1 - male, 2 - female

Hypothesis #5

The fifth hypothesis read as follows: The subjects' school major will have the effect of rating the occupation which is most closely associated to his area as a higher credible source than other occupations. Distribution of subjects according to majors was limited to the college in which they were enrolled. In this study we designated seven colleges. After collecting the data and beginning our statistical analysis, it was determined that the number of Ss in each cell required to analyze the college major as a factor in credibility rating would be 160. This number of cells would result in too few subject responses in each cell. The researchers decided to forego analysis of the Ss major since validity of the results would be in question. Future research would require a larger N in order to determine whether or not a subject's major is a factor in source credibility rating. Such a study is strongly suggested.

CONCLUSIONS, LIMITATIONS, AND IMPLICATIONS

Conclusions

This study tested sex stereotyping of occupational roles as a determinant of source credibility. The results indicated that sex stereotypification did not play a significant role in the source credibility ratings of: female subjects rating female sources, female subjects rating male sources, male subjects rating male sources and male subjects rating female sources.

Data obtained from the study revealed two important findings. First, women subjects rated all sources significantly higher than did the male subjects. This finding differs from the results of previous studies. Secondly, data from the study bore out the prediction that occupational differences would result in initial credibility differences.

An interesting perspective developed by the researchers has been the observation that despite the attention paid to the changing roles of women, there seems to be a trend towards relaxing the stringent or negative attitude of males in previously female dominated fields.

In contrast to previous research, our findings have not shown both sexes consistently valuing men more highly than women. The Miller and McReynolds (1973) study suggested that audiences manifested male chauvinism in their evaluation of a source's competence and that women are more chauvinistic than men. Our study indicated that females merely rated all communicators (male and female) tested, higher than did males. However, the amount of interaction was insignificant, thereby suggesting that chauvinism by males and/or females does not exist.

Differing from the Goldberg (1968) study, our mixed group of college students did not demonstrate a sex bias. Statistical results illustrate that women were not prejudiced against women. Females did not consider themselves inferior to men in traditionally feminine fields. In general, a sex bias by women against women was not exhibited.

The researchers compared the data resulting from isolation of the source with the findings of the studies mentioned. Declaration of sex biasness based on source credibility ratings that employed a message variable was not considered an accurate description of existing conditions. This study's elimination of a message variable provided data which indicated that sex stereotypification of occupational roles did not predetermine initial source credibility ratings. The source variable alone can not account for Goldberg (1968) and Miller and McReynolds (1973) claim of chauvinism. Results of previous studies may have been derived from either the message or a combination of message and source.

Statistical results of this study also indicate that sex stereotyping of occupations in terms of "stacking, the cards in favor of one sex or the other" (Miller and McReynolds, p. 155) does not exist.

Limitations

While the introduction and source qualifications were held constant, the fact that each of the occupations were structured as positive-high status (white collar) vocations may have biased the study in a strictly positive direction for each occupation studied. Also, subjects were selected from a beginning speech course, and had limited exposure to the concept of ethos and source credibility. This brief experience may have led some subjects to rate sources mostly neutral because of their inability to determine credibility solely from the introductory information provided.

Implications

Findings from this study suggest the need for more research in the area of sex stereotyping of occupational roles and source credibility. Since this study found no statistically significant differences between male and female credibility ratings of male and female occupation-sex combinations, we are led to conclude that sex stereotyping of occupational roles can not be considered a single determinant of source credibility.

Results of the study might imply the elimination of male and female job delineation along the occupational spectrum. Discrimination by college students, based on sex stereotyping, may no longer apply to occupational roles.

Duplication of the study should include an examination of each occupation separately to determine the degree of sex stereotypification for that occupation. The authors also suggest the use of varying populations from which to obtain data. Comparison of Ss from different regions of the country, of different age groups, and socio-economic status would provide valuable data.

REFERENCES

Barron's profiles of American colleges. (8th ed.) Woodbury, N.Y.: Barron's Educational Series, 1972.

Bryn, Kathernine. "New Era for Women in Science," Science Digest, November, 1972, pp. 54-58.

Goldberg, Philip. "Are Women Prejudiced Against Women?," Transaction, 6(1968), 28-30.

Kerlinger, Fred N. Foundations of behavioral research. (2nd ed.) New York: Holt, Rhinehart and Winston, 1973.

McCroskey, James C. Scales for the measurement of ethos. Speech Monographs, 1966, 33, 65-72.

Miller, Adeline Elizabeth, and Betty J. Brown, Ph.D. National directory of schools and vocations. (3rd ed.) North Springfield, Pa.: State School Press, 1967.

Miller, Gerald R., and Michael McReynolds. Male chauvinism and source competence: A research note. Speech Monographs, 1973, 40, 154-155.

"Now, at Last, Better Jobs for Women," Changing Times, November, 1972, pp. 37-39.

Payne, Ivan Reed. Persuability and its relationship to affect sex and type persuasive appeal. Dissertation Abstracts, 1963, 24, 3439. (Abstract)

Roose, Kenneth D., and Charles J. Andersen. A rating of graduate programs. Washington D.C.: American Council on Education, 1970.

Smith, Elsdon Coles. American surnames. Philadelphia: Chilton Book Co., 1969.

U.S. Department of Labor. Dictionary of Occupational Titles. 2 Vols. 4th ed. [Washington: Government Printing Office, 1965].

Whittaker, James O. Consistency of individual differences on persuasibility. Journal of Communication, 1965, 15, 28-34.

Whittaker, James O., and Meade, Robert D. Sex and age as variables in persuasibility. Journal of Social Psychology, 1967, 73(1), 47-52.

"Woman's Work," Newsweek, February 12, 1973, p. 74.